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EXAMINER
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ART UNIT	PAPER NUMBER
2617	

NOTIFICATION DATE	DELIVERY MODE
01/31/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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	Application No.	Applicant(s)
Office Action Summary	10/582,071	ASOU, KEIGO
	Examiner	Art Unit	
	STEVEN KELLEY	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11-11-10*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,5-8,11-14 and 17-19* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,5-8,11-14 and 17-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *4-2-07 and 5-4-09*.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

Election/Restriction

In response to the Election/Restriction mailed October 14, 2010, Applicant's have

elected (without Traverse) to proceed with claims 1, 2, 5-8, 11-14 and 17-19.

Accordingly, claims 1, 2, 5-8, 11-14 and 17-19 are examined below.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1, 2, 7, 8, 13, 14 and 19 are rejected under 35 U.S.C. 103(a) as being

unpatentable over the Prior Art (Fast Mobile IP document from October 2003 cited in

section [0019]) as shown in Figs. 3-5 and as described in sections [0002] to [0024] of

the instant application (hereinafter "the Prior Art") in view of U.S. Patent 6,587,680 to

Ala-Laurila et al. (hereinafter "Ala-Laurila").

Regarding claim 1,the Prior Art teaches a communication handover method,

which is conducted when, in a communication system where a first access router

pertaining to a first subnet and a second access router pertaining to a second subnet

different from said first subnet are connected through an IP network, a mobile terminal

connected through a radio communication to said first subnet makes connection

switching from said first subnet to said second subnet, comprising (all the preamble

features are included in the Prior Art):

a step in which said mobile terminal configures address information adaptable to

said second subnet in a state connected to said first subnet (see section [0011] of

instant application, which teaches that the mobile configures a new care of address in

the second network after receiving the PrRtAdv message in step S403 in Figs. 3 and 5);

a step in which said mobile terminal transmits an FBU message including said

address information to said first access router (see step S405 in Figs. 3 and 5);

a step in which said first access router transmits, to one of said mobile terminal

and said second access router or both said mobile terminal and said second access

router, an FBAck message for notifying a result of processing on said FBU message

(see steps S411 and S413 in Figs. 3 and 5);

a step in which said first access router starts to forward a packet, addressed to

said mobile terminal, to said second access, router according to the processing on said

FBU message (see step S415 in Fig. 3 and 5);

a step in which said second access router buffers said packet addressed to said

mobile terminal and received from said first access router (see section [0012] of the

instant application, which teaches this feature);

a step in which said mobile terminal carries out L2 handover for making

connection switching from said first subnet to said second subnet without receiving said

FBAck message from said first access router and transmits an FNA message including

said FBU message to said second access router (see steps S411 in Fig. 5 and step

S507 in Fig. 5);

a step in which said second access router confirms the validity of said address

information included in said FNA message (see section [0016] and step S509 in Fig. 5).

The Prior Art described in the instant application does not explicitly teach the

three recited steps of:

1) a step in which said second access router stores information on said FBAck

message received from said first access router;

2) a step in which said second access router makes a collation between said

FBU message included in said FNA message and information on said FBAck message

received from said first access router and stored; and

3) a step in which, when the information on said FBAck message corresponding

to said FBU message included in said FNA message and indicative of a result of the

processing on said FBU message being normal exists, said second access router

makes a selection so that said FBU message included in said FNA message is not

transferred.

Regarding these steps and the Prior Art, as described in section [0019] of the

instant application, "Although the following non-patent document 1 makes a disclosure

to the effect that, in the operating mode shown in FIG. 3, the PAR 21 transmits an

FBAck message to the MN 10 (step S411) and transmits the FBAck message to the

NAR 31 (step S413), the usage of the FBAck message transmitted to the NAR 31 is

not mentioned at any point." Therefore, it is noted that the difference between the Prior

Art and the claimed steps is the storage of the information received in the FBAck

message (labeled as step 1 above) and the subsequent steps (labeled as 2 and 3

above), which include processing (such as "collating") the stored information from step 1

above.

In an analogous art, Ala-Laurila teaches a system which provides mobile terminal

information between access points during a handover (see Abstract). As shown in Figs.

5A and 6 for example, Ala-Laurila shows that a new access point 114 receives a

Hanover Response message from the old access point 14 (step 505 in Fig. 5A), where

this message includes all the pertinent information relating to the mobile terminal. The

new access point 114 then creates (stores within 114 see column 11 lines 41-49) a

"security association" (SA) by storing this information related to the mobile terminal

(step 506 in Fig. 5A). As shown in Figs. 5B and 5C, after storing the SA in the new

access point, the new access point receives information from the mobile terminal (in

step 514 in Fig. 5B), which it then compares to it's stored information (steps 515 to 517

in Fig. 5C) in order to authenticate the mobile terminal. Fig. 6 also shows similar steps

to Figs. 5A to 5C (however there is no description of this figure, as it is similar to Figs.

5A to 5C). Therefore, Ala-Laurila teaches a "collation" between the information received

from the mobile terminal and the information stored in the security association.

Therefore, given that Ala-Laurila teaches an access point storing received information (from the old access point) relating to a mobile terminal in handover, and the Prior Art teaches that "the FBAck message is received at the second router from said first access router", it would have been obvious to one of ordinary skill to modify the Prior Art to store the information in the FBAck message (as recited in feature 1 as labeled above), in order to more efficiently process handovers.

Additionally, given the above modification, as the Prior Art teaches that the second access point "receives a FBU message included in said FNA message" and Ala-Laurila's teaches the second access point comparing it's stored information to the received information (which forms a "collation" in steps 515 to 517 in Fig. 5C), it would have been obvious to one of ordinary skill in the art to modify the Prior Art to perform feature "2" (make a collation between said FBU message included in said FNA message and information on said FBAck message received from said first access router), in order to efficiently authenticate and process handovers.

Regarding feature 3 as labeled above, Ala-Laurila teaches that after mobile terminal authentication (as described above), messages to the old access point (from the new access point) are not required. See for example, Fig. 6 where the new access point does not notify the old access point of the successful handover. Therefore, it would have been obvious to one of ordinary skill in the art to modify the Prior Art to "not transfer the FBU message included in said FNA message", as the FBU message is not required after authentication and transfer of SA between the first and second router. Additionally, regarding feature 3, as the claim language dos not specify which of the

devices (either the mobile terminal or the first access router) the second access router

"does not transfer the FBU message included in said FNA message to", although the

second access router may send the FBU message to the first access router (step 511

as shown in Figs. 4 and 5), "the FBU message included in said FNA message is *not*

transferred to the mobile terminal", which meets the recited claim language.

Regarding independent claim 7 (which recites a system performing the method

steps of claim 1), see the rejection of claim 1 above.

Regarding independent claim 13 (which recites the method steps of claim 1 as

being performed by the second access router), see the rejection of claim 1 above.

Regarding claims 2, 8 and 14, which recite "a step in which said first access

router transmits an HI message including said address information to said second

access router after receiving said FBU message from said mobile terminal (see step

S407 in Figs. 3 and 5); and a step in which said second access router confirms the

validity of said address information included in said HI message and then transmits, to

said first access router, an HAck message for making a notification to the effect that

said address information is valid" (see step S409 in Figs. 3 and 5).

Regarding claim 19, which recites "a communication message processing

program for implementing said communication message processing method according

claim 13 through the use of a computer", the methods described in the Prior Art and in

Ala-Laurila would be implemented in a "communication message processing program"

used with a computer, as recited.

3.   Claims 5, 6, 11, 12, 17 and 18 are rejected under 35 U.S.C. 103(a) as being

unpatentable over the Prior Art and Ala-Laurila as applied to claims 1, 7 and 13 above,

and further in view of U.S. Patent Pub. 2003/0073452 to Omae et al. (hereinafter

"Omae").

Regarding claims 5, 11 and 17 which recite "wherein information on a pair of

transmitting side address and transmitted side address, specified at a header of said

FBAck message, is used as the information on said FBAck Message", the Prior Art and

Ala-Laurila do not explicitly teach this feature, as recited.

In an analogous art, Omae teaches a system which uses care-of-addresses with

handoffs (see Abstract). Omae teaches in section [0124] that "In the same figure, the

binding update (BU) packet is comprised of an IPv6 header consisting of a *sender*

address (src address) and a destination address (dst address); a binding update option;

a home address option; an alternate CoA sub-option; an MA option control (MA optional

control sub-option) in which an M flag (M-flag) is set; and a payload."

Therefore, as Omae teaches the conventionality of including transmitter and receiver addresses in the header of a binding update message, it would have been obvious to one of ordinary skill in the art to modify the Prior Art (as modified above by Ala-Laurila) to include and/or use the conventional header information as taught by Omae.

Regarding claims 6, 12 and 18 which recite "comprising a step in which said second access router deletes the information on said FBAck message collated with said FBU message included in said FNA message", as there is no details relating to *when* the second access router "deletes the information", as this information would be deleted by the second access router when the mobile terminal is handed off to another (such as a third) access router, the processes of the Prior Art would perform this feature, as recited. Additionally, see section [0145] of Omae, which teaches that during handover processes the access router (mobility agent MA) "deletes the other c/o addresses, on the entries of the mobile node MN in the binding cache". See also section [0157], which teaches that "all binding information is deleted after lapse of a fixed period".

Therefore, as Omae teaches the conventionality of deleing address information, it would have been obvious to one of ordinary skill in the art to modify the second access router in the Prior Art "to delete the information on said FBAck message collated with said FBU message included in said FNA message", as recited, when handoffs or time periods occur, as is conventional.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEVEN KELLEY whose telephone number is (571) 272-5652. The examiner can normally be reached on Monday-Friday, 9AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SSK/

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